Abstract

Users in Next Generation Wireless Networks (NGWN) will have varied Quality of Service (QoS) requirements as the network operators are expected to offer plethora of services. The main objective of the network operators is to guarantee the agreed upon QoS to the users, at the same time maximize the revenue earned by having more number of users in the system. Call Admission Control (CAC) has a direct control on the number of users in the system and is a challenging problem in NGWN taking into account the limited number of channels available in the system. Designing a CAC framework with varying QoS requirements is therefore an important aspect for NGWN. This paper proposes a channel partitioning with queuing model for CAC in NGWN by taking into account the varying QoS needs of the users. The main idea behind the model is that a small amount of delay to the users is much better than not providing service at all. The simulation results for the Call Blocking Probability (CBP) of different user classes are presented.

References
Index Terms

Computer Science  Wireless Networks

Keywords

Call Admission Control  Quality Of Service  Next Generation Wireless Networks  User Class Partitioning  Queuing  Call Blocking Probability